

ABSTRACT OF THE DISCLOSURE

Interferometric system for the simultaneous measurement of the index of refraction and of the thickness of transparent materials with a single measurement operation. In said system is employed an interferometer as a "shear interferometer" with the advantage of varying the wavelength of the luminous source. The index of refraction and the thickness are determined in two phases. Firstly it is determined the optical path analyzing the displacement of interferometric signal obtained by orthogonal incidence; successively, by means of phase recovery techniques and the previously determined optical path value, it is possible to obtain the index of refraction of the material. From the knowledge of the index and of the optical path it is obtained the material thickness. The system is made up of: a laser source (1), with variable emission wavelength, a collimator (4), a sample (5), a precision rotating base (7), a photodiode (9), an oscilloscope (10), un bus IEEE-488 (12) ed a PC (11). The invention is pertinent to the technical field of the optics and to the technical field of the characterization of materials and manufacturing of optical instruments.